

No. 882,436.

PATENTED MAR. 17, 1908.

C. M. WHEELOCK.
HOT WATER HEATER.
APPLICATION FILED NOV. 16, 1907.

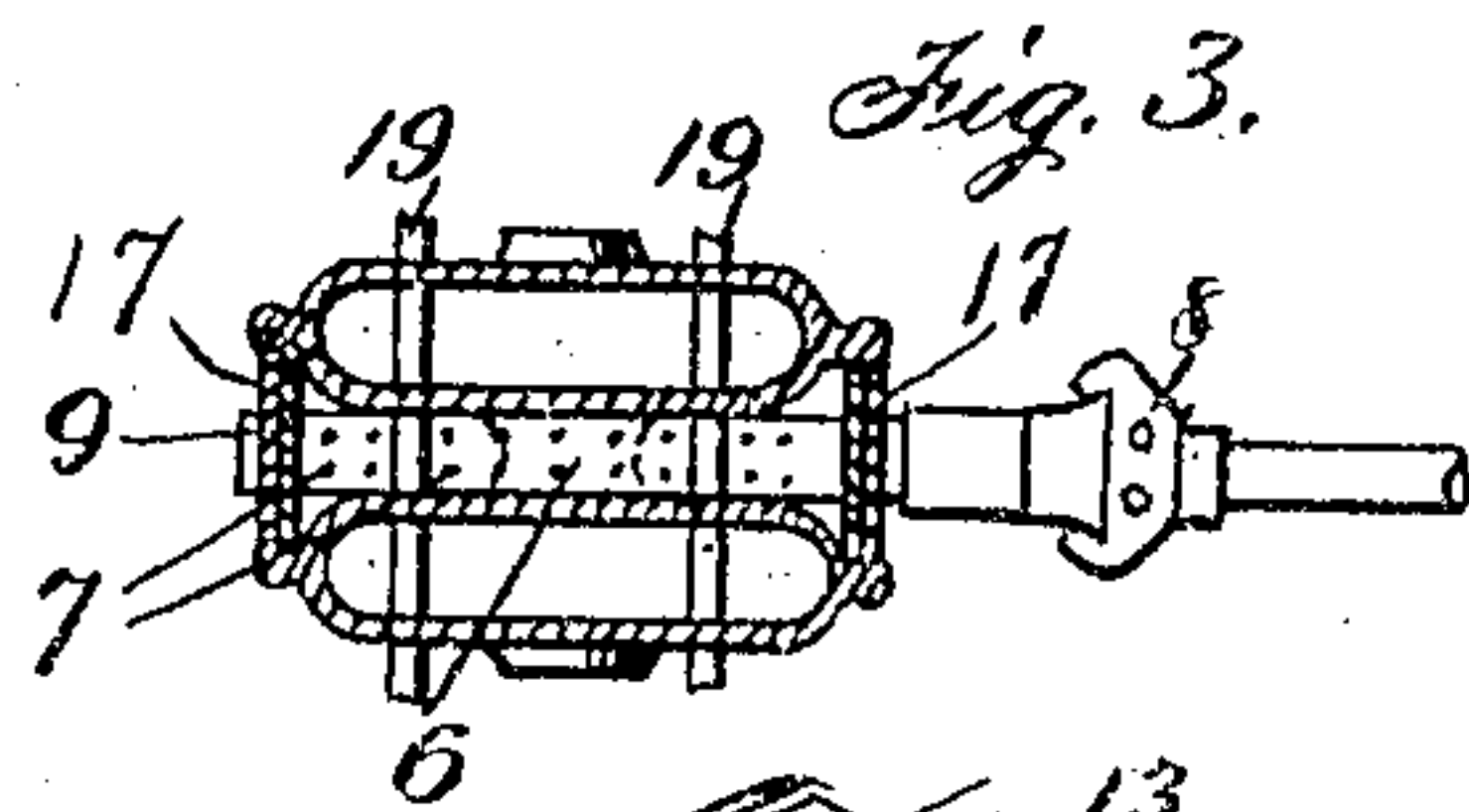
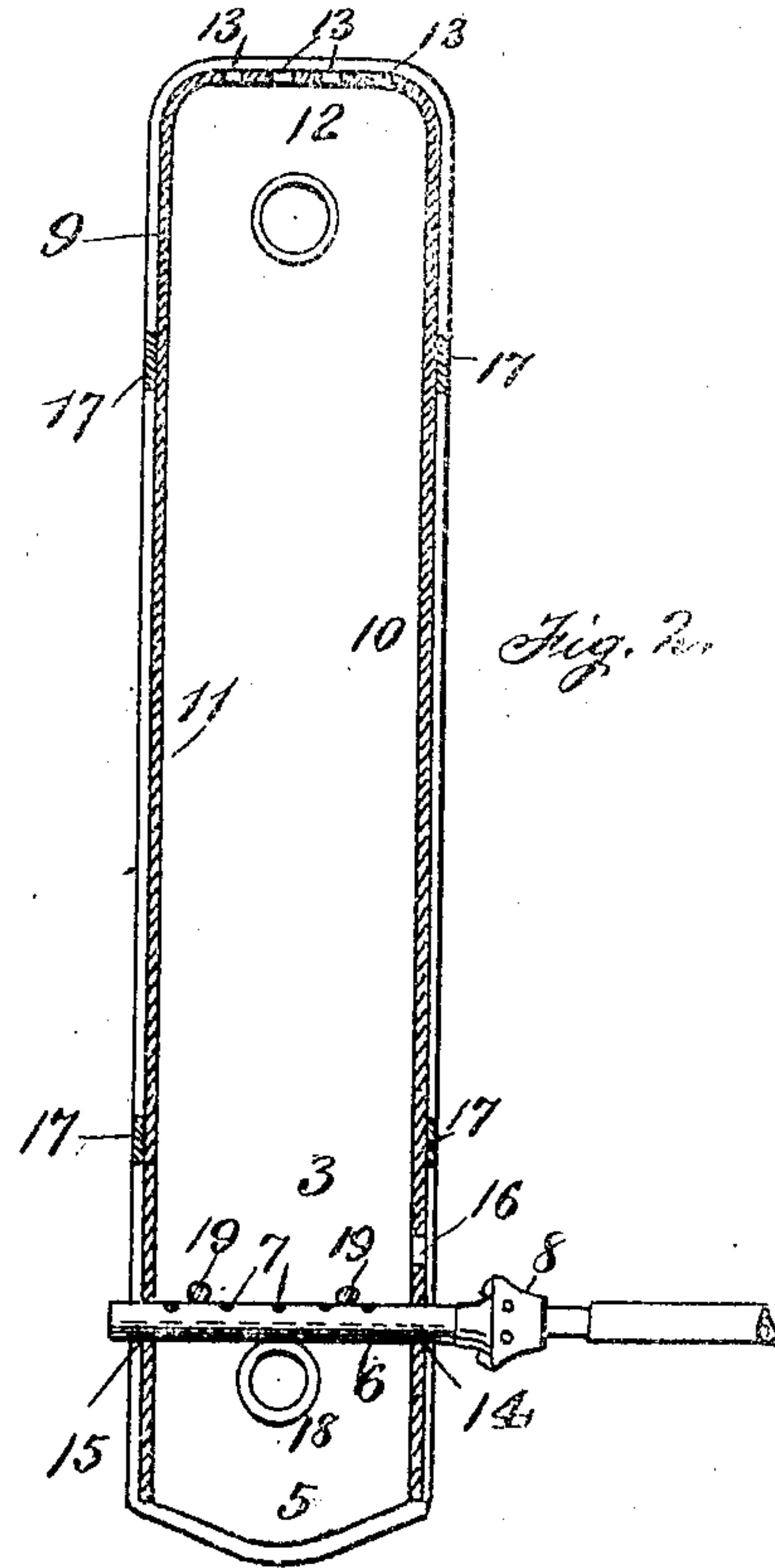
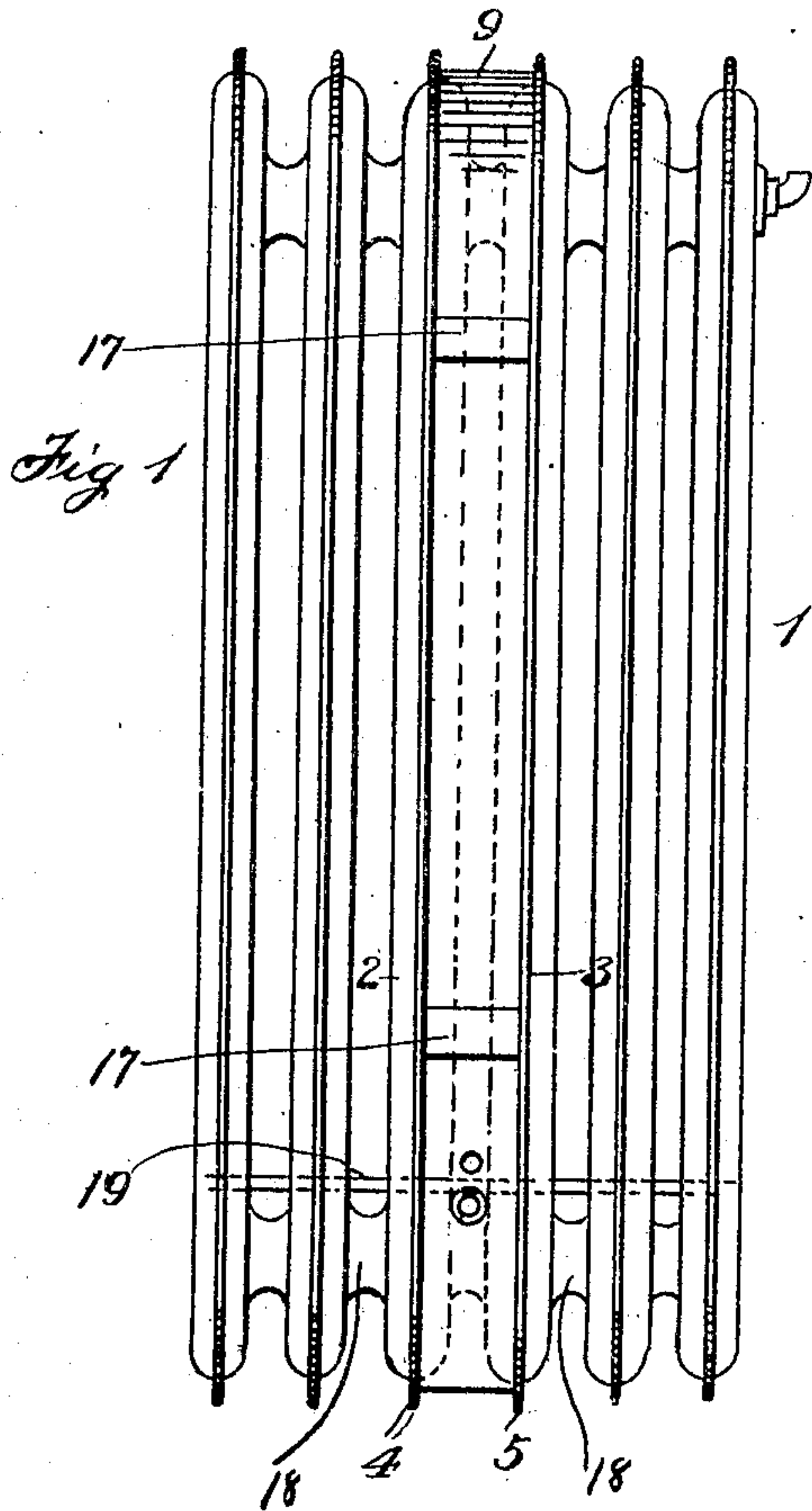


Fig. 4.

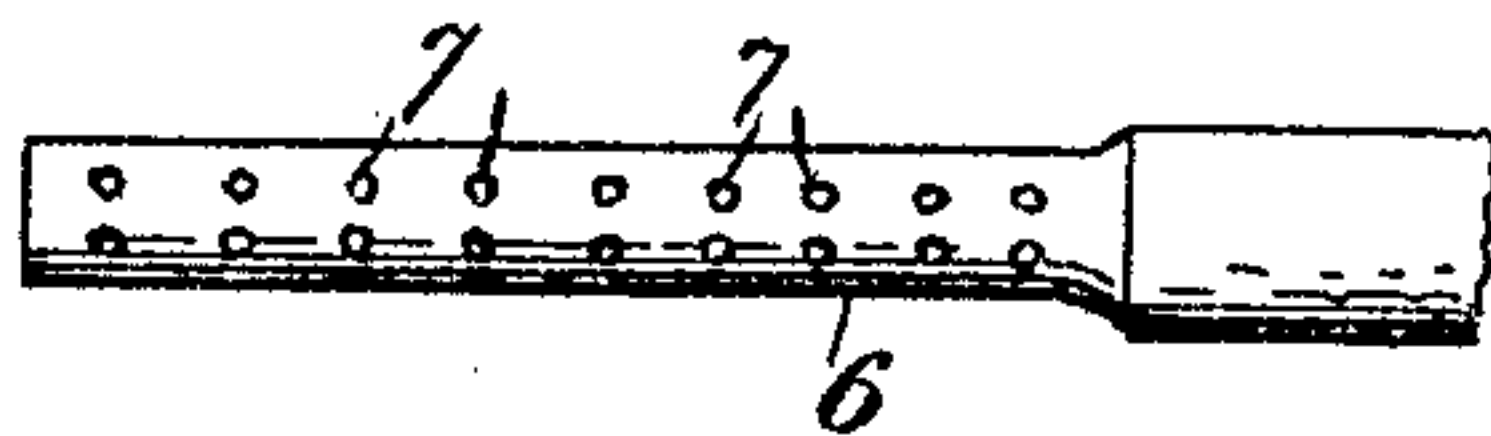
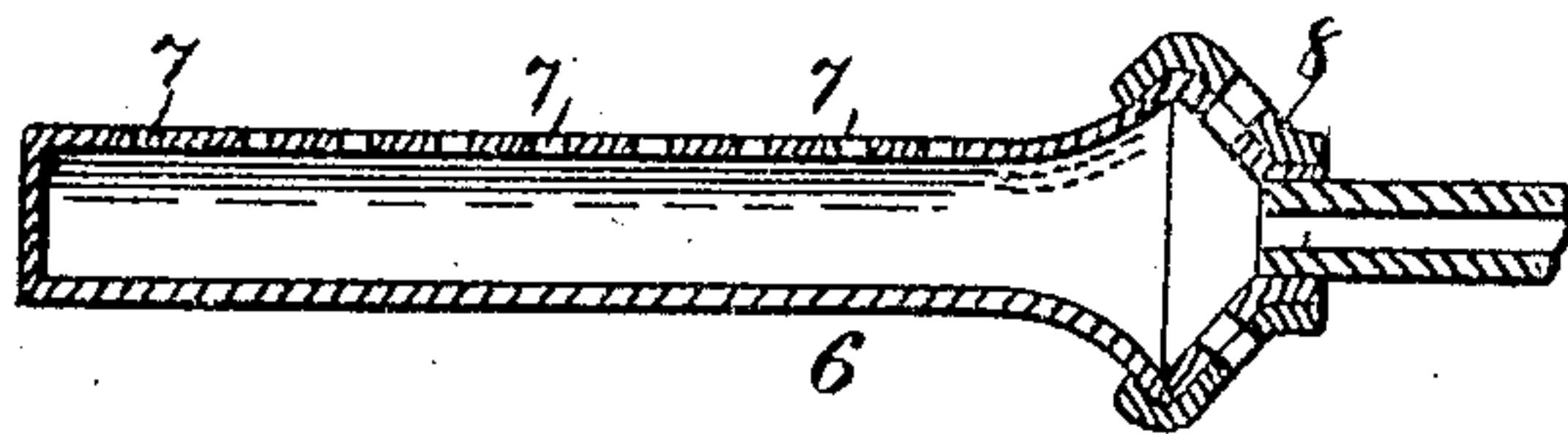
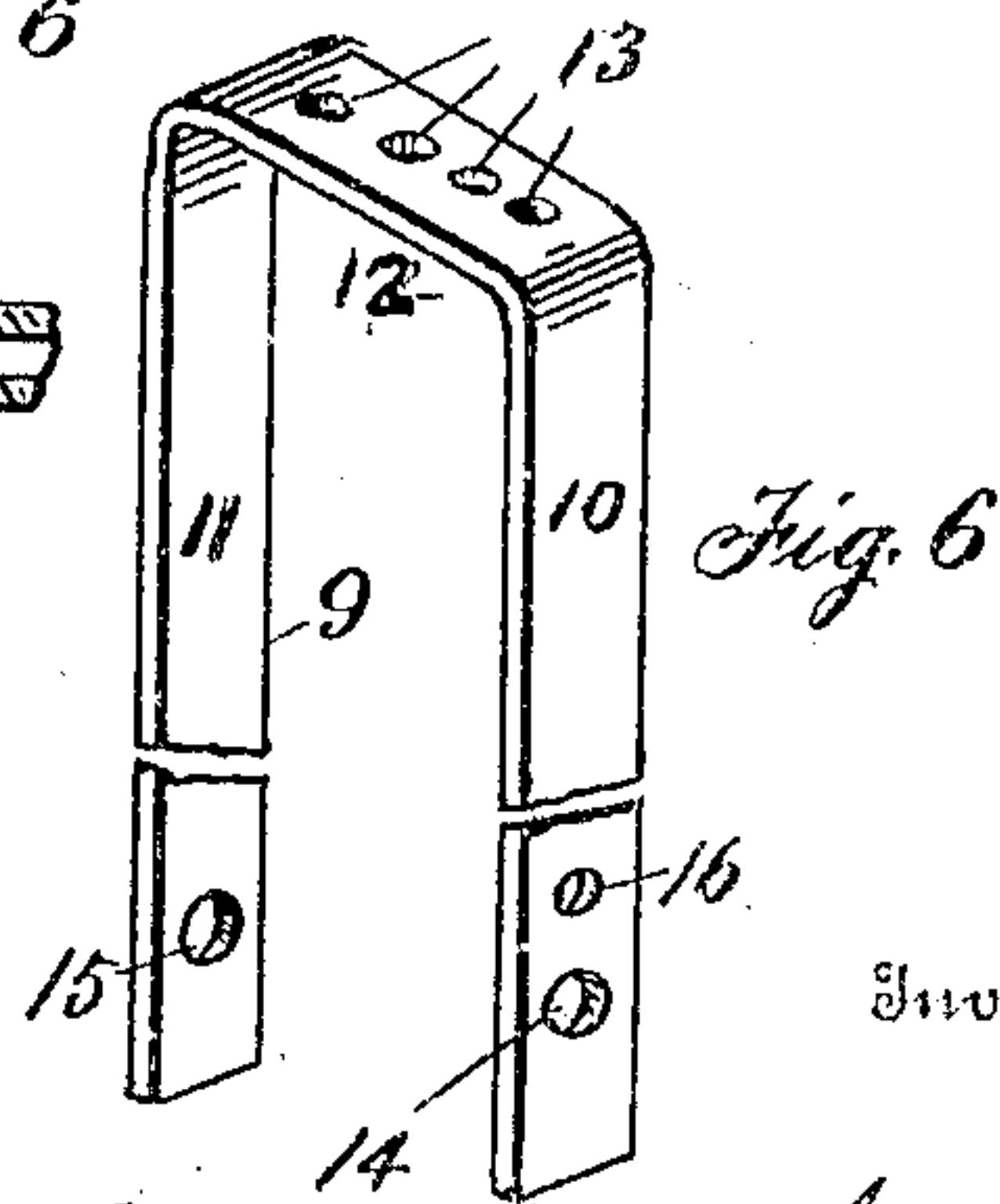


Fig. 5.



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UNITED STATES PATENT OFFICE.

CARRIE M. WHELOCK, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO SANITARY HOT WATER RADIATOR CO., INC., OF NEW JERSEY.

HOT-WATER HEATER.

No. 882,436.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed November 16, 1907. Serial No. 402,365.

To all whom it may concern.

Be it known that I, CARRIE M. WHELOCK, citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Hot-Water Heaters, of which the following is a specification.

This invention relates to a new and useful improvement in hot water heaters or radiators, and it consists in the construction hereinafter pointed out.

In the drawings: Figure 1 is a side elevation of a hot-water heater or radiator, showing my improved burner and shield applied thereto. Fig. 2 is a vertical, transverse, sectional view through a radiator, showing the burner in position and the shield in section. Fig. 3 is a horizontal sectional view through two of the sections of the radiator, said sections being in a plane above the burner. Fig. 4 is a longitudinal sectional view of the burner. Fig. 5 is a detail top plan view of the burner, and, Fig. 6 is a perspective view of the shield or casing employed for retaining the heat between the radiator sections.

In these drawings: The numeral 1 represents an ordinary hot water heater or radiator which is to be supplied with water in the usual way. Between two sections 2 and 3 of this radiator a short distance above their bottoms 4 and 5 is secured in any manner a burner 6. This burner may be elongated and provided with a number of holes 7 on the top and the ordinary air mixer 8. Preferably there is placed between the sections 2 and 3 a shield 9 to confine the heat from the burner 6. This shield is a casing of metal extending from near the bottom at one side and going over the top and down near the bottom on the other side. This shield 9 has the vertical sides 10 and 11 and the top 12. In the top 12 are holes 13, and in the sides 10 and 11 near the bottoms are the registered holes 14 and 15, and just above one hole 14 is another hole 16. The shield or casing 9 may be held in place by clamps 17 which press against the edges of the sections 2 and 3 said clamps consisting of flat pieces of spring metal, which are slightly longer than the space between the extreme outer edges of the sections, whereby when the shield is properly placed in position on the sections of the radiator and the clamps forced between the edges of the sections, the spring tension of the clamps will be sufficient to cause the ends of the clamps

to bind on the sections and hold the shield in position thereon.

The shield 9 is put into place over the radiator between the edges of the sections 2 and 3 and the clamps 17 are sprung into place. The burner 6 is passed through the holes 14 and 15 of the case.

In putting the burner 6 into place it should be passed over the top of the communication connections 18 between the sections 2 and 3, preferably resting thereon and under the radiator tie rods 19, 19, and preferably of a size to be bound slightly between them so as to be held firmly in place and yet may be withdrawn.

In use gas is turned on and ignited through the hole 16. As the radiator itself, with the aid of the casing, acts to confine the heat, almost the entire efficiency of the fuel is utilized. There is very little radiation from the casing which is quite small, and very little heat passes out at the top. Hence nearly all the heat passes into the water in the radiator. With such an economic use of heat the amount of gas consumed in proportion to the result obtained is minimized or materially reduced.

It has been the custom heretofore to place an expansion chamber at any suitable point above the radiator and connect the same to one of the sections, but in view of the fact that water in this form of radiator is heated at a point adjacent the bottom thereof, said radiator is not to be entirely filled with water, the space thus left at the upper ends of the radiator sections answering the same purpose as the usual form of expansion chamber and when the water is heated the sections of the radiator will be entirely filled by the expansion of the water. It will likewise be seen that this form of burner may be readily introduced between the sections of the common form of radiator or of any preferred make of radiator and may be introduced between any two of the sections and at any point between the top and bottom thereof.

Having described my invention, what I claim is:

1. The combination with a hot-water heater or radiator formed of parallel communicating sections; of a burner supported by the radiator and adapted to be removably secured between said sections.

2. The combination with a radiator formed of parallel communicating sections

spaced apart; of a burner supported by the radiator and adapted to be placed in the space between any two of the sections.

3. The combination with a radiator
5 formed of a plurality of water-containing sections spaced apart; of a burner supported by the radiator and adapted to be introduced in the spaces between said sections and transversely of the horizontal axis of the radiator.

10 4. The combination with a radiator formed of a plurality of water-containing communicating sections; of a burner supported by the radiator and adapted to be introduced into any one of the spaces between
15 the sections and at a point above the base of said sections, said burner extending transversely of the horizontal axis of the radiator.

5. The combination with a hot-water heater formed of communicating sections;

of a burner supported by the radiator and adapted to be introduced between any two
20 of said sections and a one-piece shield partially inclosing the space between the sections of the radiator.

6. The combination with a hot-water
25 heater or radiator formed in sections, communicating connections between said sections and tie-rods for said sections; of a burner supported by the radiator and adapted to be introduced between any two of said
30 sections and between said communicating connections and the tie-rods.

In testimony whereof I affix my signature, in presence of two witnesses.

CARRIE M. WHEELLOCK.

Witnesses:

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JOHN J. TUNSTALL.